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MOVEMENTS AND DEMOCRACY IN AFRICA**

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# CRITICAL JUNCTURES: INDEPENDENCE MOVEMENTS AND DEMOCRACY IN AFRICA\*

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## Abstract

We show that current levels of democracy in Africa are linked to the nature of its independence movements. Using different measures of political regimes and historical data on anti-colonial movements, we find that countries that experienced rural insurgencies tend to have autocratic regimes, while those that faced urban protests tend to have more democratic institutions. We provide evidence for causality in this relationship by using rough terrain as an instrument for rural insurgency, and by performing a sensitivity analysis. Finally, the evidence suggests that the adoption of rural insurgency perpetuated the use of violence as a form of conflict resolution.

**JEL codes:** D72, F54, N47.

**Keywords:** Africa, Colonial History, Critical Junctures, Democracy, Modernization.

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# 1 INTRODUCTION

The notion that economic prosperity drives political development in the form of democratic change is both intuitive and normatively appealing. Yet, despite early empirical support for this conventional wisdom, the evidence appears to be inconclusive.<sup>1</sup> For example, a recent study by Acemoglu et al. [2008] shows that the cross-country statistical association between income and democracy becomes insignificant when controlling for factors that simultaneously affect both variables.<sup>2</sup> Building on the critical junctures hypothesis, the authors suggest that the positive correlation between changes in income and democracy observed over the past 500 years may be due to the fact that societies embarked on divergent development paths at certain critical historical junctures.<sup>3</sup> They consider the date of independence as one such juncture for most countries.<sup>4</sup> They do not, however, elucidate the set of choices faced and decisions made by political actors at these turning points that may have affected institutional change. A complete critical junctures theory of democratization needs to lay out clearly how different choices made at these junctures map onto future institutional outcomes.

In this article, we use a unique data set on African anti-colonial insurgencies and social movements (c.1900 to year of independence) to investigate the links between choices made by political actors and institutional development paths. We argue that the form of anti-colonial dissent (*rural insurgency* versus *urban protest*) explains most of the cross-country variation in current levels of democracy in Africa. Using various measures of political regimes between the 1960s and 2010, we find that countries that experienced major anti-colonial *rural* insurgencies tend to have autocratic regimes, while those that mostly experienced *urban*

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<sup>1</sup>See, among others, Londregan and Poole [1996], Przeworski and Limongi [1997], Barro [1999], and Papaioannou and Siouronis [2008].

<sup>2</sup>The authors show this by including country fixed effects in their estimates of the effect of income per capita on various measures of democracy

<sup>3</sup>For other proponents of this theory, see Moore [1966], Engerman and Sokoloff [1997], and Collier and Collier [1991].

<sup>4</sup>Acemoglu et al. [2008] find that higher levels of constraint on the executive at independence significantly predict democracy.

mass protests – or non violent forms of dissent – tend to have more democratic institutions. Interestingly, we find that the divergence in development paths between these two sets of countries significantly widened in the post-1990 period, (i.e., after the end of the Cold War), presumably because domestic political actors in Africa became relatively free from foreign pressures.

The statistical association between the type of independence movement and democracy that we document in this study is robust to a number of potential confounding factors, which include: time-invariant geographic features and natural resources in each country before independence; social and institutional changes induced by colonialism; and a host of post-independence controls, including income per capita, population size, ethnic cleavages, and religious fractionalization. Our baseline results suggest that the average level of democracy among rural insurgency countries is about 0.2 points lower – on a 0-1 scale – than the average level of democracy achieved by urban protest countries during the post-1990 period. This result remains statistically significant at the conventional levels regardless of which measure of democracy we use.<sup>5</sup>

Since the type of anti-colonial movement could be endogenous to past democratic or quasi-democratic institutions or experiences, we provide evidence for causality of the relationship between the type of independence movement and level of democracy by employing an instrumental variables approach that exploits exogenous variation in terrain conditions to predict anti-colonial rural insurgencies. Specifically, this strategy relates the degree of terrain roughness to the level of democracy through its impact on the probability that a country experienced an anti-colonial rural insurgency. We rule out alternative accounts by showing that rough terrain does not affect income or violent conflict after independence. Additionally, we perform a sensitivity analysis that relaxes the exclusion restriction assumption (see

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<sup>5</sup>As we describe in detail in the data section, we use the democracy scores from Polity IV and Freedom House, which are publicly available at: <http://www.systemicpeace.org/polity/polity4.htm> and <http://www.freedomhouse.org/>, respectively.

Conley et al. [2012]), and confirm that our estimated treatment effect remains significant even when the degree of violation of this assumption is high.

Most of our econometric analysis is cross-sectional because, as we show below, the type of independence movement is time-invariant. This approach precludes the estimation of country fixed effects, which may raise legitimate concerns of potential omitted variable bias. To incorporate country fixed effects in our analysis, we exploit the structural break in the democracy data observed after the end of the Cold War. We estimate difference-in-differences as well as fixed effects regressions to test whether democracy levels changed differentially at that point in rural insurgency versus urban protest countries. Our findings confirm that the average level of democratic development is significantly lower in rural insurgency countries than in urban protest countries in the post-1990 period.

After presenting robust empirical evidence linking current-day levels of democracy in Africa to the type of independence movement experienced by each country, we formally test potential channels of causality. We provide evidence suggesting that anti-colonial movements affected post-independence political systems through the persistence of violent forms of political dissent. Urban mass protests led to non-radical forms of political expression, which facilitated peaceful transfers of power, political compromise and ultimately the consolidation of democratic reforms after the Cold War. The reverse is true where rural armed rebellion was the dominant strategy: armed rebellions created norms of violent collective action and repressive forms of government, which hindered the development of democratic institutions.

Our findings have important implications for current debates on democracy and development. To the best of our knowledge, this study is the first to highlight the impact of historical events and social movements on democratic change. The remainder of the article is organized as follows. We start by presenting a brief historical background and a conceptual

framework in Section 2. Section 3 describes our data sources. We then turn to explain our empirical approach, and present the main empirical findings in Section 4. In Section 5, we discuss potential mechanisms or channels of causality. The last section concludes.

## 2 HISTORICAL BACKGROUND AND CONCEPTUAL FRAMEWORK

### 2.1 HISTORICAL BACKGROUND

The decade following the end of World War II is widely perceived as a foundational moment for African political development (see, e.g., Cooper [1996, 2002, 2008] and Mamdani [1990, 1996]).<sup>6</sup> The isolated and sporadic movements to resist colonial rule that started at the beginning of the twentieth century evolved into large-scale Pan-African social movements, coinciding with the emergence of political parties, labor unions, newspapers, and a new generation of highly educated political elites. Among other cases, this was true of the African Democratic Rally (ADR), which became one of the most important forces that pushed for independence from France in West and Equatorial Africa, as well as the Convention People's Party (CPP) and the Tanganyika African National Union (TANU), which campaigned for independence from the British empire in current Ghana and Tanzania, respectively.

These new Pan-African political organizations were well integrated into the international socialist and labor movement, and as such, reflected its internal ideological divide. One wing was composed of Western European-style socialists, such as Kwame Nkrumah in Ghana, and Julius Nyerere in Tanzania (see Cooper [2008]).<sup>7</sup> There were also the more radical Maoist leaders, such as Frantz Fanon in Algeria, Dedan Kimathi in Kenya and Ruben Um Nyobé

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<sup>6</sup>French and British colonial governments implemented major institutional reforms with the explicit goal of containing the growing influence of independence movements. For example, in Francophone Africa, the colonial administration granted French citizenship to all natives as a way of maintaining their loyalty to the empire (see Cooper [2002]), whereas the British colonies adopted policies of gradual devolution of power to local authorities (see Mamdani [1996]).

<sup>7</sup>Other examples include Houphouet Boigny in Ivory Coast, Lamine Gueye in Senegal, Modibo Keita in Mali, and Sourou-Migan Apithy in Dahomey (Benin).

in Cameroon (see Mbembe [1996]). These two sets of leaders advocated radically different paths towards independence. While Nkrumah and Nyerere advocated urban protests, mass mobilization and non violent strategies, Fanon, Kimathi and Um Nyobé encouraged violent rebellion. For instance, in a May 1958 address to his party, Nyerere stressed the importance of a non-violent opposition to the colonial administration:

We shall wage a relentlessly determined battle against [colonialism] until we are free. We shall use no violence. We shall stoop to no dishonest methods. We shall be as clean in our methods as we are in our aims. We shall publicly declare our methods as we publicly declare our aims (see Nyerere [1967, pp. 59-60]).

In contrast, Fanon [1961] colorfully advocated the use of violence as a necessary strategy of emancipation. He wrote:

[At the national level] insurgents' violence unifies the people [...] At the level of individuals, [it] is a cleansing force. It frees the native from his inferiority complex and from his despair and inaction; it makes him fearless and restores his self-respect (p. 94).<sup>8</sup>

In the wake of this ideological divide, by the end of 1959, a dozen African countries had followed Fanon's strategy, conducting long, protracted rural armed rebellions. This was the case in Madagascar between 1947 and 1948 (see García-Ponce and Wantchekon [2011]), in Kenya with the Mau Mau uprising (1952-1960), and in Cameroon with the Union of the Peoples of Cameroon (UPC). In total, 43% of African independence movements relied heavily

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<sup>8</sup>In his preface to Fanon [1961], Jean-Paul Sartre synthesized the thinking of Fanon as follows: "When the peasant takes a gun in his hands, the old myths grow dim and the prohibitions are one by one forgotten. The rebel's weapon is the proof of his humanity. For in the first days of the revolt you must kill: to shoot down a European is to kill two birds with one stone, to destroy an oppressor and the man he oppresses at the same time: there remain a dead man, and a free man; the survivor, for the first time, feels a national soil under his foot" (see Fanon [1961, p.22]).



on rural violent conflict. The remaining countries followed Nyerere and Nkrumah's "positive action" (non violent) strategy, organizing mass protests or peaceful demonstrations – mainly in urban areas or capital cities, such as Dakar (Senegal) and Accra (Ghana) – against the fading colonial rule.

The choice between these contrasting strategies was driven in part by geographic conditions, with enormous consequences for post-independence political institutions.<sup>9</sup> To illustrate how geography dictated the choice between rural insurgency and urban protest, consider the case of Guinea Bissau and Cape Verde. Despite the Maoist ideological leaning of the African Party for the Independence of Guinea and Cape Verde (PAIGC), the leaders of the movement chose the urban protest strategy in the flat terrain of Cape Verde. The armed resistance occurred in the dense, jungle regions of Guinea-Bissau. Amilcar Cabral, the founder of the PAIGC wrote:

Everyone knows that in general the guerrilla force uses the mountains as a starting point for the armed struggle. We had to convert our people themselves into the mountain needed for the fight in our country, and we had to take full advantage of the jungles and swamps in our country to create difficult conditions for the enemy in his confrontation with the victorious advance of our armed struggle (Cabral [1969, p. 18]).

## 2.2 CONCEPTUAL FRAMEWORK

Africa is the continent with the greatest variation in political regimes, as measured by the Polity IV scores (see Figure 1) . While a number of countries such as South Africa, Ghana and Benin have experienced major democratic reforms after the end of the Cold War, others

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<sup>9</sup>Anti-Nazi resistants in Greece faced similar choices, i.e., between urban and rural insurgencies. The communist party leaders were split into two groups: those favoring military operations in the mountains and those who wanted to move the operations in the capital city, Athens (see Woodhouse and Clogg [2002]).

such as Cameroon, Congo and Zimbabwe either remained autocracies or became unstable democracies plagued by political violence. Despite similarities in economic development, there is a drastic divergence in democratic trajectories between these two sets of countries.<sup>10</sup>

Following the seminal work by Lipset [1959], social scientists have attempted to explain changes in levels of democracy by focusing on the role of income (see, e.g., Benhabib et al. [2011], Londregan and Poole [1996], and Przeworski and Limongi [1993 and 1997]), education (e.g., Glaeser et al. [2007]), and factor mobility (e.g., Boix [2003]), among other *modernization*-related variables. These studies provide mixed empirical evidence.<sup>11</sup> For instance, Glaeser et al. [2007], and Boix [2003] find that education and factor mobility have a positive effect on democratization. As mentioned earlier, Acemoglu et al. [2008] show that income does not predict democracy when including country fixed effects, which control for both observable and unobservable time-invariant characteristics. This latter finding also holds within the context of Africa. We have replicated the results from Acemoglu et al. [2008] restricting the sample to the set of African countries, and confirmed that income does not predict democracy when incorporating country fixed effects.<sup>12</sup>

In this paper we build on the critical junctures framework – the idea that institutional change which affects both economic and political development is initiated by differences during a certain critical historical juncture (see, e.g., Acemoglu et al. [2008, 2009], Acemoglu and Robinson [2012], Capoccia and Kelemen [2007], and Collier and Collier [1991]). We posit that current levels of democracy in Africa are linked to crucial choices made by countries on

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<sup>10</sup>A simple t-test of the difference in means between rural insurgency and urban protest countries (as defined in the data section) fails to reject the null hypothesis that they are equal to one another in terms of income per capita at the 90 percent confidence level.

<sup>11</sup>Other conventional explanations of African democratization emphasize that African countries with stable democracies are those with "wise" political leaders and civil society organizations with strong democratic values (see, e.g., Bratton and Van de Walle [1997], and Joseph [1997]). However, civil society strength and leadership style are highly endogenous to democratization. We therefore need to further investigate the political and historical factors that facilitate the emergence of democratic values and practices in the first place.

<sup>12</sup>For the sake of brevity, these results are not reported in the present article, but they can be provided from the authors upon request.

their road to independence. As discussed in Section 2.1, there were two potential strategies for African independence movements: (1) violent rebellion or (2) mass protests.<sup>13</sup> We argue that decisions made at that historical moment significantly shaped both current institutions and norms of behavior. Mass protests enabled participants to develop norms of peaceful political expression and compromise. This provided cultural and institutional bases for liberal democracy. In contrast, armed rebellions generated a culture of political exclusion that tends to perpetuate the use of violence as a form of political expression and conflict resolution.

### 3 DATA

To empirically estimate the effect of anti-colonial rebellions on democratic development in Africa, we combine data from a number of sources: (i) an in-depth review of historical events to code each country as either having a legacy of rural rebellion or urban protest; (ii) cross-country annual measures of democracy levels, based on Polity IV and Freedom House scores; (iii) data on rough terrain and other time-invariant geographic characteristics; (iv) colonial and pre-colonial factors, such as urbanization, colonial origins, slave exports, and European descent; and (v) a set of contemporaneous controls, including income per capita, population measures and ethnic and religious fractionalization.

#### 3.1 RURAL INSURGENCY VERSUS URBAN PROTEST

Our independent variable of interest distinguishes countries that experienced major *rural* anti-colonial insurgencies from those that manifested anti-colonialism through *urban* protests. "Rural insurgency" refers to armed rebellions, predominantly based in rural settings, and organized in the style of Mao's Red March. This involves the implementation of guerrilla-like tactics, which are often associated with rough terrain (see, e.g., Fearon and Laitin [2003], and

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<sup>13</sup>Choice between these two strategies may depend on geography, demography, or economic factors (see Fearon and Laitin [2003]).

Hegre and Sambanis [2006]). On the other hand, the concept of "urban protest" refers to social movements that rely heavily on non-violent forms of dissent (see Opp [2002]). This includes the organization of mass protests and demonstrations, as well as the creation of underground political organizations that operate without violence, two acts which are more likely to occur in urban settings and flat terrain.

Based on in-depth reviews of the geographical origins, recruitment strategies, organizational structure and rebellion tactics of the major African anti-colonial movements covering the period between 1900 and the year of independence (c.1950s)<sup>14</sup>, we coded each country as either having a legacy of rural insurgency or urban protest. While these two forms of struggle are not necessarily mutually exclusive, we found that all African independence movements were characterized by the adoption of strategies and tactics of political dissent that were either mostly rural (armed rebellion) or mostly urban (mass protest).

A country is coded as having a legacy of rural insurgency on the basis of the following criteria: (i) at least one anti-colonial revolt took place between 1900 and the year of independence; (ii) the rebel group originated in a rural area or in the country's periphery; (iii) the goal was independence or regime change; (iv) guerrilla-like tactics were employed during the conflict; (v) the estimated death toll was at least 1,000. If these conditions are met, the rural insurgency variable is coded as 1, and 0 otherwise. Figure 2 shows a map of Africa with the dominant type of movement experienced by each country.<sup>15</sup> A summary of the cases and additional details are available in the Online Appendix.

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<sup>14</sup>Only seven countries were independent before 1960: Egypt (1922), Libya (1951), Morocco (1953), Sudan (1956), Tunisia (1956), Ghana (1957), and Guinea (1958). And only six countries achieved independence after the 1960s: Guinea Bissau (1974), Angola (1975), Mozambique (1975), Zimbabwe (1980), Namibia (1990), and Eritrea (1993).

<sup>15</sup>There are 54 territories in Africa recognized as sovereign states by the United Nations. Our study only excludes five of these countries. South Sudan is excluded from the analysis because it is a newly formed country (July 2011). Liberia is not included in our analysis because it was never colonized. Burundi, Djibouti and Lesotho are treated as part of Rwanda, Somalia and South Africa, respectively. In the first and second cases, it is practically impossible to treat these countries separately because Burundi and Djibouti were part of Rwanda and Somalia before the 1960s. In some cases, due to the lack of data on democracy levels, Sao Tome and Principe and Seychelles are dropped from the data set.

### 3.2 MEASURES OF DEMOCRACY

We use Polity IV and Freedom House scores as measures of democratization. The former evaluates the openness of political regimes on a scale from -10 (strongly autocratic) to 10 (strongly democratic). Components of this index include competitiveness of political participation, the openness and competitiveness of executive recruitment, and constraints on the chief executive. This data set covers all major, independent states in the global system from 1800 to 2010. The latter index is an annual comparative assessment of political rights and civil liberties in 194 countries that has been published since 1972. Each country is assigned two numerical ratings – one for political rights and one for civil liberties – based on a 1 (most free) to 7 (least free) scale. Each pair of political rights and civil liberties ratings is averaged to determine an overall measure of democracy.

To make our results perfectly comparable across these two different measures of democracy, we normalized both Polity IV and Freedom House scores on a scale ranging from 0 (strongly autocratic/least free) to 1 (strongly democratic/most free). We take into consideration annual scores of these indices for all African countries between the year of independence and 2010. Figure 1 shows the distribution of the Polity IV data worldwide as of 2010.<sup>16</sup>

### 3.3 ROUGH TERRAIN AND OTHER GEOGRAPHIC CONDITIONS

Theories that focus on feasibility to explain the causes of civil war suggest that geographical factors play a critical role in determining how a conflict is fought (see Collier and Hoeffler [2007]). To explain why some countries have experienced rural rebellions rather than urban protests, it is important to understand the conditions that favor rural uprising. Recent studies in political science have shown that the presence of rough terrain is positively correlated with civil war onset (see, e.g., Fearon and Laitin [2003] and Hegre and Sambanis [2006]). As

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<sup>16</sup>Given the high correlation between Polity IV and Freedom House scores, the distribution of democracy around the world looks almost identical regardless of which measure is used to generate Figure 1.

argued by Buhaug and Gates [2002]:

Rough terrain is ideal for guerrilla warfare and difficult for a government army to control. Mountain areas, giving advantage to rebel troops, allow the rebels to expand the scope of conflict, whereas forests provide cover, particularly against detection or aerial attack. This aids in the freedom of movement and shipment of arms, thereby associated with a wider zone of conflict (p. 422).

Our analysis utilizes the percentage of country area covered by mountains as a measure of rough terrain<sup>17</sup>, based on data from Fearon and Laitin [2003].<sup>18</sup> We also incorporate other relevant geographic characteristics in the analysis, such as: land size, the percentage of the land surface area of each country that has fertile soil, the percentage of desert, and the percentage of tropical climate, as well as the average distance to nearest ice-free coast, an indicator for presence of oil, and another indicator for the presence of gem-quality diamond extraction.<sup>19</sup>

### 3.4 COLONIAL DATA

Democracy level may be correlated with factors induced by colonialism, such as demographic changes and institutions. More politically sophisticated societies during the colonial era may have become naturally suitable for democracy. To gauge the extent to which a country had developed a politically sophisticated society, we incorporate the average urban population growth rate 1950-1955 (i.e., around the time of independence for most countries), based on data from the World Bank. Likewise, it may be possible that the variation in democ-

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<sup>17</sup>Our main results are robust to other definitions of rough terrain, including the terrain ruggedness index proposed by Nunn and Puga [2012], which captures small-scale terrain irregularities, such as caverns, caves and cliff walls, which could potentially facilitate guerrilla tactics. However, we find that large-scale terrain irregularities, as defined by a country's area covered by mountains, is a better predictor of rural insurgency.

<sup>18</sup>This variable is based on work by geographer A.J. Gerard for the World Bank's "Economics of Civil War, Crime, and Violence" project.

<sup>19</sup>These data come from Nunn and Puga [2012].

racy levels across Africa is explained by the type of institutions or policies implemented by the colonizers. Therefore, we include indicators for British and French colonial origin, estimates of the number of slaves exported between 1400 and 1900 in Africa's four slave trades (Nunn and Wantchekon [2011]) and the percentage of the population of European descent (Nunn and Puga [2012]).<sup>20</sup>

### 3.5 CONTEMPORANEOUS DATA

Since our independent variable of interest is time-invariant, the core of our econometric analysis is cross-sectional and excludes post-treatment (i.e., post-independence) measures of relevant control variables to avoid biases in our estimates of the effect of rural insurgency on democracy. However, as shown in the following section, our results are robust to the inclusion of post-independence and contemporaneous socio-economic characteristics, which are plausibly relevant in shaping political institutions. Specifically, we incorporate contemporaneous measures of GDP per capita and population size for the 1960-2010 period (based on data from the World Bank), as well as measures of ethnic and religious fractionalization during the 1990s (Fearon and Laitin [2003]).

### 3.6 SUMMARY OF DESCRIPTIVE STATISTICS

Table 1 shows the descriptive statistics of the main variables used in the analysis. Note that the democracy data from Freedom House is available for 49 African countries, whereas the Polity IV scores are only available for 47. The two missing countries in the Polity IV data are Sao Tome and Principe, and Seychelles. For brevity, we do not show descriptive statistics of panel-level variables.

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<sup>20</sup>The European descent estimates are based on the percentage of the year 2000 population in every country that is descended from people who resided in Europe in 1500.

## 4 THE EFFECT OF INDEPENDENCE MOVEMENTS ON DEMOCRACY

To estimate the effect of the type of independence movement on democracy, we employ a number of empirical strategies, each of which is meant to address different potential concerns regarding the identification of causal effects. We start by assessing the strength of the relationship between the type of movement (rural versus urban) and democracy level over time, and find that countries that experienced anti-colonial rural insurgencies tend to be less democratic than those that experienced urban protests. The gap in democracy levels between these two sets of countries becomes fairly large and statistically significant at the 5% level in the post-1990 period. In the second subsection, we report the results from a series of cross-sectional OLS regressions of post-1990 democracy on rural insurgency, controlling for a number of potential confounders. We then address potential endogeneity concerns by employing an instrumental variables approach that relates exogenous variation in rough terrain to democracy levels through its impact on rural insurgency. Finally, to exploit variation over time and to control for both observable and unobservable time-invariant characteristics of the countries, we estimate difference-in-differences and fixed-effects models.

### 4.1 RELATIONSHIP BETWEEN THE TYPE OF INDEPENDENCE MOVEMENT AND DEMOCRACY OVER TIME (1960s-2010)

The development of democracy in Africa has been unevenly distributed. While the average level of democracy has significantly increased over the course of the past 20 years, a number of countries have experienced little or no democracy to date. Figure 3 displays the relationship between the type of independence movement and democracy levels over time, as measured by the Polity IV and Freedom House indices. The data indicate that countries exposed to a legacy of rural insurgency tend to be less democratic than their counterparts. This trend seems to run parallel to the so-called "third wave" of democratization and is very



clear after 1990, that is, after the end of the Cold War. Note, however, that some interesting patterns can be identified before the 1990s. The gap in Freedom House scores between these two sets of countries is rather narrow during the 1970s and 1980s, but the gap in Polity IV scores becomes visible since the late 1970s. This suggests that institutional changes preceded the expansion of civil and political rights.

The relationship between the type of independence movement and level of democracy is shown in regression form in Figure 4. Specifically, we estimate ordinary least squares (OLS) regressions of the average level of democracy on the rural insurgency indicator by decade. The point estimates plotted in Figure 4 show that the effect of rural insurgency on democracy is negative and statistically significant (at the 5% level) during the 1990s and 2000s. For these two decades, a legacy of rural insurgency decreases the average level of democracy by about 0.2 points on a 0-1 scale. As for the previous decades, the estimated effect is negative, but smaller in magnitude and not statistically significant at the 10% level.

We hypothesize this post-Cold War effect is due to the fact that it was not until the collapse of the Soviet Union that African countries became relatively free from international pressure, and as a consequence, domestic political actors started playing a more decisive role in shaping local institutions. In other words, democracy levels in Africa tended to be lower during the Cold War for reasons that provisionally nullified the effect of the type of anti-colonial movement. One such reason could be that in wartime the West and the Soviets supported dictators who aligned with them. This hypothesis is consistent with the evidence presented by Boix [2011] that the great powers blocked, either directly or indirectly, a number of democratic transitions in the ideologically polarized context of the Cold War.<sup>21</sup>

It is also worth noting that the gap in democracy levels between the two types of countries (rural versus urban) widens further in the 2000s, particularly after the September 11,

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<sup>21</sup>Several other studies have shown how after the collapse of the Soviet Union, Europeans and Americans supported democratization in across the world (see, e.g., Dunning [2004], Gleditsch and Ward [2006], Levitsky and Way [2005] and Meernik, Krueger, and Poe [1998]).

2001 attacks on the United States. On the one hand, we see the level of democratic development increasing among the set of urban protest countries, and on the other, rural insurgency countries either stagnating (Polity IV) or experiencing a democratic reversal (Freedom House).

## 4.2 OLS ESTIMATES

In this subsection we show that the statistical association between rural insurgency and post-1990 (i.e., post-Cold War) levels of democracy is robust to a number of potential confounders. Specifically, we estimate the following cross-sectional regression:

$$y_i = \beta_0 + \beta_1 RURAL_i + \mathbf{X}_i' \phi + \varepsilon_i \quad (1)$$

where  $y_i$  is the post-1990 average level of democracy, as measured by either Polity IV or Freedom House, for country  $i$ ;  $RURAL_i$  is a dummy variable that takes on a value of 1 if a country is coded as having a legacy of rural insurgency, and 0 otherwise; and  $\mathbf{X}_i'$  is a vector of control variables, which varies across specifications. As usual,  $\beta_0$  is a constant, and  $\varepsilon_i$  is a disturbance term. The parameter of interest is  $\beta_1$ , which measures the effect of rural insurgency on democracy.

The results shown in Tables 2 and 3 confirm that the statistical association between rural insurgency and democracy is robust to a number of *geographic*, *colonial*, and *contemporaneous* potential confounders. For the sake of clarity, we assess the robustness of our estimates by isolating each subset of covariates, and then by including the full set of controls. The results reported in column (1) of each table show the estimated effect of rural insurgency on democracy without controls, which is -0.16 (standard error 0.07) based on Polity IV data, and -0.21 (standard error 0.07) using the Freedom House index.

In the models reported in column (2) of each table, we introduce a subset of relevant ge-

ographic controls affecting level of democracy and institutional development across Africa: the log of the percentage of fertile land surface in each country, the log of the percentage of desert, the log of the percentage tropical climate, the average distance to the closest coast (in thousands of kilometers), the land area, a dummy variable that is equal to 1 if a country has oil, and a dummy variable that is equal to 1 if a country has gem-quality diamonds. The estimated effect is about the same size as previously estimated and remains statistically significant at the conventional levels. Column (3) presents the results controlling for the following colonial factors (as defined in the data section): urban growth during the 1950s, colonial origins (British and French), slave exports, and European descent. These models yield almost identical results as those reported in columns (1) and (2).

The results shown in column (4) include a subset of contemporaneous controls: the log of the average post-1990 GDP per capita, the log of the average population size during the same period, and average levels of ethnic and religious fractionalization during the 1990s. The estimated effect on Polity IV scores remains practically unchanged, whereas the estimated effect on Freedom House scores is slightly smaller in magnitude and less precise (significant only at the 10% level). We should, however, interpret these results with some caution. Within our estimation framework, post-independence measures of these variables are potentially affected by the treatment (rural insurgency), and their inclusion could induce post-treatment bias in our estimation of the relationship between rural insurgency and democracy.

Column (5) presents evidence that our estimates are robust to the inclusion of both geographic and colonial controls. Again, the estimated effect of size of rural insurgency remains almost unchanged and statistically significant at the 5% level. This is our benchmark specification, as it includes the full set of pre-treatment covariates. In column (6), we add the contemporaneous controls so that we control for the full set of pre-treatment and post-treatment covariates. The estimated effect is larger and very precisely estimated. But again, this is the

less preferred specification, since it is likely to suffer from post-treatment bias.

One legitimate concern with regard to the evidence presented thus far is the possibility of miscoding various types of independence movements. Some countries are unquestionably either rural or urban, but other cases are not clean cut. Algeria is one such case. The Algerian War for independence took the form of both large-scale guerrilla warfare and urban mass protests. We have coded Algeria as a rural insurgency country for two main reasons. First, the FLN (French acronym of Front of National Liberation) had a military wing, the ALN (the Army of National Liberation) – which killed several civilians (e.g., in Philippeville in 1955 and 1956). Second, FLN evolved into a disciplined fighting force by gaining control of strategic mountainous regions. Nonetheless, some may argue that the insurgent groups relied heavily on urban-based movements such as the Triumph of Democratic Freedoms (MTDL), and hence it is troubling to code Algeria as having one legacy, either of rural insurgency or urban protest. Ultimately, the two types of independence movements are not mutually exclusive.

The question is then whether our main results are robust to the exclusion of specific countries such as Algeria. Similarly, one could worry that the observed treatment effect is driven by one single case, or by one specific subregion. To address these concerns, we test the sensitivity of our results to the exclusion of individual countries and entire subregions – North Africa, Maghreb, West Africa, Middle Africa, and Southern Africa, as defined by the United Nations. We evaluate the influence of individual countries and subregions by estimating the effect of rural insurgency in the absence of each country or subregion. Specifically, we estimate a regression of post-1990 democracy on rural insurgency, controlling for both geographic and colonial controls – our preferred specification. The results visualized in Figure 5 indicate that our main findings remain statistically significant regardless of which country or subregion is excluded from the analysis.

### 4.3 IV ESTIMATES

We have shown so far that the relationship between rural insurgency and democracy is empirically robust. However, there is a major challenge to the identification of the causality in the relationship between effect of the type of anti-colonial movement and democracy. Rural insurgency and urban protest countries may differ in ways that are correlated with both democracy and the probability of having experienced a particular kind of anti-colonial movement. One such possibility is that the degree of democratization achieved by pre-colonial or colonial societies explains both the type of anti-colonial movement and the type of institutional arrangement after independence. In other words, the adoption of rural insurgency as a form of political dissent during colonial times could be endogenous to the existence of past democratic institutions, experiences, or norms of behavior.

To address potential concerns of bias stemming from reverse-causality, we employ an instrumental variables (IV) approach that exploits exogenous variation in a country's terrain to predict rural insurgency. Specifically, this strategy relates the percentage of rough terrain to the level of democracy achieved after the 1990s through its impact on the probability of having experienced rural insurgency as the dominant form of struggle for independence. The first stage can be represented as follows:

$$RURAL_i = \beta_0 + \gamma TERRAIN_i + \mathbf{X}_i' \rho + \vartheta_i \quad (2)$$

where  $TERRAIN_i$  is the log of the percentage of country  $i$ 's area covered by mountains. Thus, the second stage is given by:

$$y_i = \beta_0 + \lambda \widehat{RURAL}_i + \mathbf{X}_i' \eta + \omega_i \quad (3)$$

Equations (2) and (3) are estimated in one step via 2SLS. A causal interpretation of these

estimates requires a valid first stage and that the exclusion restriction to be satisfied. Variation in terrain roughness is plausibly exogenous to democratic institutions, and strongly correlated with rural insurgency. Table 4 shows the results from logistical (Logit) regressions and Linear Probability Models (LPM) of the first-stage relationship between rough terrain and rural insurgency. The 0.22 coefficient reported in column (1) indicates that a country twice as mountainous as another has a 15 percentage points higher probability of having a legacy of rural insurgency. This finding is robust to geographic and colonial controls, and statistically significant at the 1% level across estimation methods.

We find these results indicative of a strong relationship between local terrain conditions and the forms of political dissent under colonial rule. Anti-colonial movements in countries covered by mountains, jungle, or other types of terrain irregularities may have exploited the peculiarities of their geography by adopting guerrilla-like tactics. Opposition movements in countries where the terrain is rather flat would have found it unfeasible to organize themselves as violent rebel groups, and hence decided to fight colonialism by conducting mass protests and implementing other strategies of peaceful dissent, such as the creation of clandestine newspapers, civic associations, and underground political organizations, among others.

Table 5 shows that higher levels of rough terrain are significantly associated with less democracy in the reduced-form regressions, controlling for different subsets of covariates. This is the first piece of evidence suggesting that terrain conditions affect democratization. The second-stage equation estimates are reported in Table 6. The results are robust to a number of controls and statistically significant at the conventional levels. In particular, the point estimates for our preferred specification – which includes both geographic and colonial controls – imply that, all else equal, rural insurgency countries are about 0.24 (see column (4)) or 0.29 (see column (8)) points less democratic than their counterparts, as measured by

the Polity IV and Freedom House indices, respectively.

To satisfy the exclusion restriction, rough terrain should affect the post-1990 average level of democracy only through its effect on the adoption of rural insurgency as a means to achieve independence. One potential violation of the exclusion restriction is that terrain conditions may affect democracy through income-related channels. For instance, irregularities in the terrain may block access to resources and hence affect both income and democracy. A more plausible violation of the exclusion restriction is the possibility that rough terrain may facilitate the adoption of guerrilla tactics, not only before, but also after independence. We address these concerns in two ways. First, we conduct a series of falsification exercises that estimate the potential effects of rough terrain on post-independence violence and economic growth. Second, we explore the sensitivity of our IV estimates to different degrees of violation of the exclusion restriction, following the methods proposed by Conley et al. [2012].

In columns (1)-(4) of Table 7, we report the results from a series of regressions of the log of the average income per capita (between the year of independence and 1989) on rural insurgency. The point estimates are statistically indistinguishable from zero, which helps us rule out the income channel as an alternative account. The coefficients reported in columns (5) and (7) of the same table suggest that rough terrain has a moderately positive effect on the average number of civil wars experienced by a country between the year of independence and 1989. However, this effect becomes statistically insignificant when controlling for other geographic characteristics (see columns (6) and (8)).

A key part of our argument is that rough terrain helps explain why some countries decided to fight colonialism via rural insurgency, but it does not necessarily explain why the use of violence as a form of political expression and conflict resolution is perpetuated during the post-independence period. Evidence from the relevant political science literature suggests that the presence of mountainous terrain is positively correlated with the onset of civil

war (e.g., Fearon and Laitin [2003], and Hegre and Sambanis [2006]). To further examine the relationship between rough terrain and conflict onset within Africa, we have replicated the main results from Fearon and Laitin [2003, p.84], restricting the sample to the subset of African countries. The results shown in columns (1) and (5) of Table 8 indicate that rough terrain – defined as the log of the percentage of country area covered by mountains<sup>22</sup> – is positively correlated with two different measures of civil war onset over the 1960-1999 period.<sup>23</sup> Note, however, that the results are not statistically significant for "ethnic" war (see column (3)).<sup>24</sup>

In columns (2), (4) and (6) of Table 8, we estimate the same regression models as in columns (1), (3), and (5), but with the rural insurgency dummy ( $RURAL_i$ ). The results indicate that the coefficient on rural insurgency is positive and statistically significant across specifications, whereas the estimated effect of rough terrain becomes statistically insignificant. Within this estimation framework, the type of independence movement – i.e., rural insurgency – should be interpreted as an intermediate outcome between rough terrain and the endpoint outcome – i.e., civil war onset after independence. Therefore, the fact that the relationship between rough terrain and civil war onset "goes away" after controlling for the intermediate outcome may reflect that rough terrain affects civil war onset mostly through rural insurgency in independence movements.

Based on the results from these falsification exercises, we feel confident that rough terrain does not significantly affect democracy levels through either income or post-independence violent conflict. Nevertheless, given that the exclusion restriction is fundamentally untestable,

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<sup>22</sup>To be consistent with variable names from Fearon and Laitin [2003], the rough terrain variable is reported as  $\log(\% \text{ mountainous})$  in Table 8.

<sup>23</sup>In column (1), the dependent variable is a dummy variable for civil war onset, coded as "1" for all country-years in which a civil war started and "0" for all others, based on the original data collected by Fearon and Laitin [2003]. In column (5), the dependent variable is a dummy for civil war onset, as defined in the Correlates of War (COW) project.

<sup>24</sup>In this model, the dependent variable marks the onset of wars coded as "ethnic" or "partially ethnic" by Fearon and Laitin [2003].



legitimate doubts about the extent to which the exclusion restriction holds may remain. We provide additional evidence that our main estimated effects – reported in columns (4) and (8) of Table 6 – remain statistically significant even assuming large departures from perfect exogeneity. Specifically, we undertake a sensitivity analysis based on the methods proposed by Conley et al. [2012] to construct confidence intervals under the assumption that the direct effect of the instrument is near zero, but perhaps not exactly zero. This approach relaxes the exclusion restriction assumption, but still provides valid inference statements for any beliefs about the validity of the instrument (see Conley et al. [2012, p.261]).

Following Conley et al. [2012], we employ two strategies to construct confidence intervals around the treatment parameter while relaxing the exclusion restriction. The first strategy requires only to specify a range of plausible values for the direct effect of the instrument – without requiring complete specification of a prior distribution – to compute the union of symmetric intervals.<sup>25</sup> The second strategy uses a large-sample approximation that models uncertainty about the direct effect of the instrument as being the same order of magnitude as sampling uncertainty. The econometric jargon for this strategy is that the direct effect of the instrument is treated as being "local-to-zero."<sup>26</sup> We use different priors for the direct effect of rough terrain on democracy. These priors are indexed by the parameter  $\delta$ .

Figure 6 visualizes the results of the sensitivity analysis. The set of dashed lines in black present the symmetric 2SLS 90% confidence intervals around the estimated effect of rough terrain on democracy through rural insurgency. The set of solid lines in light gray corresponds to the local-to-zero approximation method. We observe that the IV estimates remain statistically significant even with substantial departures from the assumption that the direct effect of the instrument is zero.<sup>27</sup>

<sup>25</sup>See Conley et al. [2012, p.262] for additional details about the "Union of Confidence Intervals with  $\gamma$  Support Assumption."

<sup>26</sup>See Conley et al. [2012, p.264] for additional details about " $\gamma$  Local-to-Zero Approximation."

<sup>27</sup>As shown in Figure 6, the direct effect of rough terrain on democracy should be between 0.015 (Polity IV) and 0.03 (Freedom House) so that our results become insignificant, which represents about 25 and 40 percent,

#### 4.4 DID AND FE ESTIMATES

In this subsection we address additional concerns regarding potential omitted variable bias. Given the time-invariant nature of our treatment, most of our econometric analysis has relied on exploiting cross-sectional variation. One obvious drawback of this approach is that it precludes the estimation of country fixed effects, given that the unit effect dummies and the rural insurgency variable would be perfectly collinear. To incorporate country fixed effects in our analysis, we exploit the structural break in the democracy data generated by the collapse of the Soviet Union.

The evidence presented thus far consistently shows that the effect of rural insurgency on democracy is more noticeable after the end of the Cold War. As previously discussed, we believe this is because foreign political actors exerted power and influence in African politics during the Cold War, and it was not until the collapse of the Soviet Union that domestic political actors started playing the decisive role in shaping local institutions. If this argument is correct, we should see that democracy levels change differentially after the end of Cold War in rural insurgency versus urban protest countries. At first sight, this is what the data in Figure 3 suggest.

To empirically test this hypothesis, we employ a difference-in-differences (DID) approach that compares democracy levels before and after the end of the Cold War in rural insurgency versus urban protest countries. Specifically, we estimate the following regression:

$$y_{it} = \alpha_i + (RURAL_i \times post1990_t)\theta + post1990_t\psi + \varepsilon_{it} \quad (4)$$

where  $y_{it}$  is the average level of democracy in period  $t$  (i.e., before or after the Cold War), as measured by either Polity IV or Freedom House, for country  $i$ ;  $\alpha_i$  are country fixed

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respectively, of the estimated effect in the reduced-form regressions (see columns (4) and (8) of Table 5). We believe this is very unlikely to be the case since we have already ruled out alternative accounts such as income and violent conflict after independence.

effects that control for both observable and unobservable time-invariant characteristics of the countries;  $post1990_t$  is an indicator equal to 1 for the post-Cold War period, and 0 otherwise;  $RURAL_i \times post1990_t$  interacts the rural insurgency variable with the post-1990 indicator; and  $\varepsilon_{it}$  is a disturbance term. The coefficient of interest is  $\theta$ , which captures the differential change in expected levels of democracy in the rural insurgency versus urban protest countries after the end of the Cold War.

We also estimate the fixed effects (FE) regression below, where  $\tau_t$  are year fixed effects, and  $\mathbf{X}'_{it}$  is a vector of time-varying controls that includes the log of income per capita and the log of population size.

$$y_{it} = \alpha_i + \tau_t + (RURAL_i \times post1990_t)\theta + \mathbf{X}'_{it}\zeta + \varepsilon_{it} \quad (5)$$

The results reported in Table 9 confirm our previous findings. The DID estimates shown in columns (1) and (4) indicate that the average level of democracy is significantly lower in rural insurgency countries than in urban protest countries in the post-1990 period. The FE regressions yield similar results (see columns (2)-(3), and (5)-(6)), and the estimates are statistically significant at the 1% level, even when controlling for time-varying factors.

## 5 POTENTIAL MECHANISMS

Having estimated the effect of independence movements on levels of democracy in Africa, we now investigate the mechanisms of this relationship. Following the standard approach in the empirical analysis of historical processes, we consider two alternative pathways through which African independence movements could affect contemporary political outcomes: institutions and political culture.<sup>28</sup> Our first hypothesis focuses on institutions. We examine the role of early post-independence constitutional arrangements in shaping future demo-

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<sup>28</sup>See Nunn and Wantchekon [2011] for an illustration of this approach.

cratic development. Anti-colonial rural insurgencies may have generated exclusive institutions immediately after independence, reflecting the "zero-sum" nature of violent conflicts, whereas urban protests may have generated inclusive constitutional arrangements, reflecting the broad diversity of mass movements. The underlying implication is that early post-independence institutions resulting from the type of independence movement experienced by each country may account for the variation in current levels of democracy.

Our second hypothesis is that armed struggles may have perpetuated political violence, making post-colonial (civil) wars more likely to occur in countries that fought violently for their independence.<sup>29</sup> This could be because rural insurgencies legitimated the use of violence as a form of political expression and facilitated the spread of arms. Conversely, peaceful protests may facilitate the emergence of a civil society.<sup>30</sup> The logic behind this latter outcome was clearly outlined in Nyerere [1967]. Responding to the rise in political contestation in post-independence Tanzania, he wrote:

It is clear that the independence campaign has had great influence on [current] attitudes [in] independent Tanzania. TANU's emphasis on the morality of its case, and its stress on peaceful methods, has created among the people certain expectations about the actions of their independent nation and its leadership. TANU called for equality; our people now expect it [...] We called for equality of opportunity; our people are now critical that this does not exist. It is these moral expectations which create both the problems and the opportunities in the very different circumstances of the post-independence period in Tanzania (p. 4).

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<sup>29</sup> According to Kagwanja [2003], the Mau Mau movement left a legacy that partially explains political violence in Kenya today. In particular, he examines the Mungiki movement, a radical religious-political group that "has been responsible for human rights violation, and insecurity in Nairobi and Central Kenya" (p. 29). Mungiki leaders openly embrace their ties to the Mau Mau legacy: its National Coordinator Ibrahim Waruinge, declared: "We [Mungiki] have Mau Mau blood in us and our objectives are similar. Mau Mau fought for land, freedom and religion [...] and so do we." (Kagwanja [2003, p.30])

<sup>30</sup> Another aspect of the cultural channel could be the persistence of militaristic and hierarchical forms of organizations inherited from rural insurgencies.

We operationalize these hypotheses as follows. First, we investigate the strength of the institutional channel by testing whether the rural insurgency dummy is associated with the average level of constraint on the executive – as defined in the Polity IV data<sup>31</sup> – during the Cold War years (1960s-1989). This may tell us whether the experience of an anti-colonial rural insurgency influenced constitutional provisions established immediately after independence. Second, we test whether the rural insurgency dummy is associated with higher levels of intrastate conflict during the Cold War – measured as the fraction of years between independence and 1989 during which the country was at war.<sup>32</sup> Additionally, we use individual-level survey data to assess whether rural insurgency is associated with higher levels of support for violence and authoritarian rule.

The results shown in Tables 10 reveal that the relationship between rural insurgency and executive constraints during the Cold War years is not significantly different from zero. This suggests that the type of independence movement did not immediately influence the extent to which countries institutionalized constraints on the decision-making powers of their chief executives. We find support for the second hypothesis. Rural insurgency countries exhibit a higher incidence of violent intra-state conflict during the Cold War than urban protest countries. The most conservative estimate (see column (4)) indicates a 17 percentage point difference in the fraction of years at war between these two sets of countries during the 1960s-1989 period.

In Table 11, we show estimates of the effect of rural insurgency on post-1990 democracy, controlling for the outcome variables used in Table 10, i.e., the average level of executive

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<sup>31</sup>Operationally, "this variable refers to the extent of institutionalized constraints on the decision making powers of chief executives, whether individuals or collectivities. Such limitations may be imposed by any 'accountability groups.' In Western democracies these are usually legislatures. Other kinds of accountability groups are the ruling party in a one-party state; councils of nobles or powerful advisors in monarchies; the military in coup-prone polities; and in many states a strong, independent judiciary." (see Marshall, Jaggers and Gurr [2011, p.25])

<sup>32</sup>The econometric analysis is restricted to the set of countries for which the data on civil wars from Fearon and Laitin [2003] are available.

constraint and the fraction of years at war between the 1960s (or year of independence) and 1989. This allows us to assess the extent to which these variables mediate the relationship between the type of independence movement and the level of democracy in the post-Cold War era. Note that we also control for the full set of covariates used in previous specifications. According to the results, the constraints imposed on the executive power during the Cold War do not tell us much about the relationship between anti-colonial movements and current democracy levels. On the other hand, intrastate conflict during the Cold War seems to be significantly and negatively correlated with post-Cold War democracy.

By comparing the estimated coefficients on rural insurgency with and without the inclusion of the "Civil wars 1960s-1989" variable, we observe that about 20% of the estimated relationship between the type of anti-colonial movement and post-1990 democratic development can be explained by the incidence of civil wars during the Cold War. We find this evidence indicative of how colonial wars may have perpetuated, and even legitimated, the use of violence as a form of political expression.

In Table 12, we provide additional empirical evidence in support of the political culture hypothesis. We present the results of a series of regressions using the Afrobarometer survey data<sup>33</sup> to assess whether rural insurgency countries are more (or less) likely to accept violence and autocracy than urban protest ones. Specifically, we estimate the effect of rural insurgency on support for the use of violence in politics<sup>34</sup>, and support for one-party rule<sup>35</sup>.

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<sup>33</sup>The Afrobarometer measures public attitudes on economic, political, and social matters in more than a dozen African countries. Surveys are conducted on a regular cycle. The data are publicly available at: [www.afrobarometer.org](http://www.afrobarometer.org).

<sup>34</sup>In the Afrobarometer Round 3, which was conducted in 18 countries of Sub-Saharan Africa during 2005, respondents were asked to choose which of the following statements was closest to their view: (A) "The use of violence is never justified in politics" or (B) "In this country, it is sometimes necessary to use violence in support of a just cause." Answer options included: (i) agree very strongly with A, (ii) agree with A, (iii) agree with B, (iv) agree very strongly with B, (v) agree with neither. We have recoded this variable as an indicator that equals 1 if "agree with B" or "agree very strongly with B", and 0 otherwise.

<sup>35</sup>Rounds 2, 3 and 4 of the Afrobarometer – conducted in 2002, 2005, and 2008, respectively – asked the following question: "There are many ways to govern a country. Would you disapprove or approve of the following alternative? Only one political party is allowed to stand for election and hold office." Answer options included: (i) strongly disapprove, (ii) disapprove, (iii) neither approve nor disapprove, (iv) approve, and (v) strongly approve. We recoded this variable as an indicator equal to 1 if the respondent approves or strongly approves

The estimated equation is of the following form:

$$y_{jc} = \beta_0 + \beta_1 RURAL_c + \mathbf{X}'_j \tilde{\xi} + \varepsilon_{jc} \quad (6)$$

where  $y_{jc}$  is the outcome of interest, i.e., a dummy equal to 1 if respondent  $j$  from country  $c$  supports the use of violence in politics (or supports one-party rule).  $RURAL$  is an indicator that equals 1 if the respondent lives in a country that is coded as having a legacy of rural insurgency;  $\mathbf{X}'$  is a vector of individual controls that includes age of the respondent, a gender indicator variable, an indicator variable that equals 1 if the respondent lives in a rural location, five fixed effects for the respondent's living conditions, ten fixed effects for the educational attainment of the respondent and ten fixed effects for the ethnicity of the respondent.<sup>36</sup> Since our independent variable of interest (rural insurgency) only varies across countries, we cluster the standard errors in all regressions at the country level.

The results shown in Table 12 indicate that rural insurgency is positively correlated with both support for violence and support for one-party rule. These results are robust to the inclusion of individual controls and statistically significant at the conventional levels across estimation methods (LPM and Logit). The most conservative estimates show that, *ceteris paribus*, the probability of approving the use of violence in politics is 6% higher if a respondent is from a country with a legacy of rural insurgency. Likewise, the probability of agreeing to have only one party in elections increases by 9% if a respondent is from a rural insurgency country.

While these results are merely indicative of a correlation between the type of independence movement and the extent to which citizens legitimate the use of violence, they are consistent with the idea that the adoption of rural insurgency normalized the use of violence

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one-party rule, and 0 otherwise.

<sup>36</sup> Additionally, we include Afrobarometer Round fixed effects in all regressions that use support for one-party rule as the outcome variable.

as a form of political expression and conflict resolution, thus eroding democratic norms and facilitating the emergence of autocratic regimes.

## 6 CONCLUDING REMARKS

We use a unique data set on social movements and rural insurgencies during colonial rule in Africa to investigate the institutional legacies of African independence movements. We find that countries that experienced major rural rebellions tend to be more autocratic or unstable, while those with anti-colonial urban protests tend to be more democratic. The evidence also suggests that the adoption of rural insurgency in the struggle for independence perpetuated the use of violence as a form of political expression and conflict resolution in the post-colonial era.

In contrast with the economic and political science literature on conflicts, we adopt a broad definition of conflict that includes non-violent mass protests, and urban social movements, in addition to violent insurgencies. This comprehensive approach to political conflict enables us to highlight the comparative effect of violent dissent and to investigate the "political" origins of dictatorships and democracies. We show how current political regimes are shaped by past conflicts.

Our results contribute to the critical junctures theory by mapping choices made at a crucial and foundational moment in African political history onto future development paths. We show that qualitative features of past conflicts may have independent effects on current institutions. In particular, colonial history matters for African political development not only because of "extractive" or inefficient policies enacted by the colonial administration, but also because of the way African pro-independence leaders chose to oppose colonizers.

Our focus on past political events to explain current institutional outcomes does not imply that structural factors such as levels of development, inequality, ethnic diversity, and ed-



education are not important in explaining political change. Future research might examine the way social movements, broadly defined, mediate the relationship between structural variables and institutional change. Further investigation may reveal, for instance, how economic inequalities and ethnic diversity might contribute to the radicalization of social movements, and how such movements, in turn, might facilitate the emergence of autocratic regimes. In contrast, economic prosperity and urbanization might be shown to lead to the emergence of moderate mass movements, which could facilitate the implementation of democratic reforms.

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Table 1: Summary of Descriptive Statistics

VARIABLES	Observations	Mean	Std. Dev.	Min.	Max.
<i>Dependent variables</i>					
post-1990 Polity IV	47	0.50	0.24	0.05	1.00
post-1990 Freedom House	49	0.39	0.28	0.00	0.99
<i>Independent variables of interest</i>					
Rural insurgency	49	0.43	0.50	0.00	1.00
Rough terrain	49	1.59	1.29	0.00	4.31
<i>Geographic controls</i>					
Fertile soil	49	3.17	0.94	0.01	4.49
Desert	49	0.83	1.33	0.00	4.33
Tropical climate	49	2.99	1.94	0.00	4.62
Distance to coast	49	0.32	0.24	0.00	0.81
Land size	49	9.89	2.14	3.83	12.38
Oil	49	0.07	0.16	0.00	0.45
Gems	49	0.29	0.46	0.00	1.00
<i>Colonial controls</i>					
Urban growth 1950s	47	3.32	1.82	0.00	8.50
French colony	49	0.39	0.49	0.00	1.00
British colony	49	0.39	0.49	0.00	1.00
Slave exports	49	8.85	5.12	0.00	15.10
European descent	47	0.56	0.93	0.00	3.75
<i>Contemporaneous controls</i>					
GDP per capita	47	6.29	1.07	4.63	8.81
Population	47	15.89	1.38	12.99	18.65
Ethnic fractionalization	44	0.67	0.24	0.04	0.95
Religious fractionalization	44	0.44	0.23	0.00	0.78

*Notes.* The *post-1990 Polity IV* and *post-1990 Freedom House* variables measure the average level of democracy for each country between 1991 and 2010; *Rural insurgency* is coded as 1 if a country experienced an anti-colonial rural insurgency in the road to independence (see Data section); *Rough terrain* is the natural log of the percent of a country's area covered by mountains; *Fertile soil* is the log of the percentage of the land surface area of each country that has fertile soil; *Desert* is the log of the percentage of desert; *Tropical climate* is the log of the percentage tropical climate; *Distance to coast* is the log of the average distance to the closest ice-free coast (in thousands of kilometers); *Land size* is the log of the land area; *Oil* is a dummy equal to 1 if a country has oil; *Gems* is a dummy equal to 1 if a country has gem-quality diamonds; *Urban growth 1950s* is the average urban population growth rate between 1950-1955; *British* and *French* are colonial origin indicators; *Slave exports* is the log of the estimated number of slaves exported between 1400 and 1900 in Africa's four slave trades; *European descent* is the log of the percentage of European descent; *GDP per capita* is the log of the 1991-2010 average GDP per capita; *Population* is the log of the average population size during the 1991-2010 period; and *Ethnic* and *Religious* fractionalization measure the average levels of ethnic and religious fractionalization during the 1990s.

Table 2: RURAL INSURGENCY AND POST-1990 POLITY IV SCORES

DV IS POST-1990 POLITY IV	(1)	(2)	(3)	(4)	(5)	(6)
Rural insurgency	-0.16** (0.07)	-0.19** (0.07)	-0.17** (0.07)	-0.16** (0.07)	-0.21*** (0.07)	-0.33*** (0.09)
<i>Geographic controls</i>						
Fertile soil		0.07* (0.04)			0.08* (0.05)	0.07* (0.04)
Desert		0.00 (0.05)			0.04 (0.04)	0.08* (0.04)
Tropical climate		-0.01 (0.03)			0.02 (0.04)	0.10* (0.05)
Distance to coast		0.03 (0.19)			0.12 (0.22)	-0.16 (0.28)
Land size		0.01 (0.04)			0.02 (0.05)	0.15* (0.07)
Oil		-0.28* (0.16)			-0.27 (0.20)	-0.29 (0.31)
Gems		-0.00 (0.09)			-0.05 (0.09)	-0.20** (0.09)
<i>Colonial controls</i>						
Urban growth 1950s			0.01 (0.02)		-0.01 (0.02)	-0.01 (0.02)
French colony			0.00 (0.09)		-0.04 (0.09)	0.01 (0.10)
British colony			-0.01 (0.09)		-0.04 (0.08)	0.04 (0.10)
Slave exports			0.01 (0.01)		0.00 (0.02)	-0.00 (0.02)
European descent			0.12*** (0.04)		0.13** (0.05)	0.24*** (0.07)
<i>Contemporaneous controls</i>						
GDP per capita				0.03 (0.05)		-0.04 (0.07)
Population				-0.01 (0.03)		-0.07 (0.05)
Ethnic fractionalization				0.26 (0.20)		-0.48 (0.30)
Religious fractionalization				0.22 (0.22)		0.55* (0.28)
N	47	47	47	43	47	43
R <sup>2</sup>	0.12	0.24	0.27	0.25	0.41	0.64
σ	0.23	0.23	0.22	0.22	0.22	0.18

Notes. All estimates are based on OLS regressions. Robust standard errors are shown in parentheses. The *post-1990 Polity IV* variable measures the average level of democracy for each country between 1991 and 2010, which ranges from 0 (strongly autocratic) to 1 (strongly democratic). \*\*\* is significant at the 1% level; \*\* is significant at the 5% level; and \* is significant at the 10% level.



Table 3: RURAL INSURGENCY AND POST-1990 FREEDOM HOUSE SCORES

DV IS POST-1990 FREEDOM HOUSE	(1)	(2)	(3)	(4)	(5)	(6)
Rural insurgency	-0.21*** (0.07)	-0.21** (0.08)	-0.16** (0.07)	-0.15* (0.08)	-0.20** (0.08)	-0.29** (0.11)
<i>Geographic controls</i>						
Fertile soil		0.11** (0.05)			0.09 (0.05)	0.08 (0.05)
Desert		0.00 (0.05)			0.03 (0.04)	0.05 (0.06)
Tropical climate		-0.03 (0.03)			0.02 (0.05)	0.08 (0.06)
Distance to coast		0.06 (0.23)			0.14 (0.24)	-0.16 (0.29)
Land size		-0.03 (0.03)			0.01 (0.06)	0.14* (0.08)
Oil		-0.18 (0.17)			-0.20 (0.20)	-0.39 (0.37)
Gems		0.02 (0.10)			-0.06 (0.10)	-0.22* (0.11)
<i>Colonial controls</i>						
Urban growth 1950s			0.01 (0.02)		-0.00 (0.03)	-0.00 (0.02)
French colony			0.11 (0.10)		0.07 (0.11)	0.06 (0.12)
British colony			0.14 (0.11)		0.10 (0.10)	0.14 (0.14)
Slave exports			0.01 (0.01)		0.01 (0.02)	-0.00 (0.02)
European descent			0.18*** (0.04)		0.18*** (0.05)	0.23*** (0.08)
<i>Contemporaneous controls</i>						
GDP per capita				0.06 (0.05)		0.00 (0.08)
Population				-0.03 (0.03)		-0.09* (0.05)
Ethnic fractionalization				0.32 (0.21)		-0.37 (0.41)
Religious fractionalization				0.15 (0.25)		0.38 (0.31)
N	49	49	47	43	47	43
R <sup>2</sup>	0.13	0.33	0.38	0.23	0.49	0.60
σ	0.27	0.26	0.23	0.25	0.23	0.22

Notes. All estimates are based on OLS regressions. Robust standard errors are shown in parentheses. The *post-1990 Freedom House* variable measures the average level of democracy for each country between 1991 and 2010, which ranges from 0 (strongly autocratic) to 1 (strongly democratic). \*\*\* is significant at the 1% level; \*\* is significant at the 5% level; and \* is significant at the 10% level.

Table 4: ROUGH TERRAIN AND RURAL INSURGENCY

DV IS RURAL INSURGENCY	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rough terrain	0.22*** (0.04)	1.13*** (0.35)	0.19*** (0.04)	1.22*** (0.40)	0.22*** (0.05)	1.25*** (0.37)	0.19*** (0.06)	1.41*** (0.49)
Geographic controls?			✓	✓			✓	✓
Colonial controls?					✓	✓	✓	✓
Estimation	LPM	Logit	LPM	Logit	LPM	Logit	LPM	Logit
<i>N</i>	49	49	49	49	47	47	47	47
<i>R</i> <sup>2</sup>	0.31		0.42		0.36		0.44	
<i>σ</i>	0.42		0.42		0.43		0.45	

*Notes.* Estimates are based on Linear Probability Models (LPM) and logistic regressions (Logit). Robust standard errors are shown in parentheses. The *Rough terrain* variable is measured as the natural log of the percent of a country's area covered by mountains [Fearon and Laitin, 2003]. Geographic and colonial controls include those reported in Tables 2 and 3. \*\*\* is significant at the 1% level; \*\* is significant at the 5% level; and \* is significant at the 10% level.

Table 5: REDUCED-FORM ESTIMATES: ROUGH TERRAIN AND DEMOCRACY LEVELS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	POST-1990 POLITY IV				POST-1990 FREEDOM HOUSE			
Rough terrain	-0.04* (0.03)	-0.05* (0.03)	-0.05* (0.03)	-0.05* (0.03)	-0.07** (0.03)	-0.07*** (0.03)	-0.07*** (0.03)	-0.08*** (0.03)
Geographic controls?		✓		✓		✓		✓
Colonial controls?			✓	✓			✓	✓
<i>N</i>	47	47	47	47	49	49	47	47
<i>R</i> <sup>2</sup>	0.06	0.18	0.21	0.33	0.10	0.32	0.40	0.49
<i>σ</i>	0.24	0.24	0.23	0.23	0.27	0.26	0.23	0.23

*Notes.* Estimates are based on OLS regressions. Robust standard errors are shown in parentheses. *Rough terrain* is measured as the natural log of the percent of a country's area covered by mountains. Geographic and colonial controls include those reported in Tables 2 and 3. \*\*\* is significant at the 1% level; \*\* is significant at the 5% level; and \* is significant at the 10% level.

Table 6: IV ESTIMATES: RURAL INSURGENCY AND DEMOCRACY LEVELS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	POST-1990 POLITY IV				POST-1990 FREEDOM HOUSE			
Rural insurgency	-0.21* (0.12)	-0.26** (0.12)	-0.21* (0.12)	-0.28** (0.13)	-0.32** (0.13)	-0.38*** (0.13)	-0.32** (0.12)	-0.41*** (0.15)
Geographic controls?		✓		✓		✓		✓
Colonial controls?			✓	✓			✓	✓
<i>N</i>	47	47	47	47	49	49	47	47
<i>R</i> <sup>2</sup>	0.11	0.22	0.26	0.39	0.09	0.26	0.31	0.39
<i>σ</i>	0.22	0.21	0.20	0.19	0.27	0.24	0.23	0.21

*Notes.* Estimates are based on two-stage least-squares regressions. Robust standard errors are shown in parentheses. *Rural insurgency* is instrumented by *Rough terrain*, which is measured as the natural log of the percent of a country's area covered by mountains. Geographic and colonial controls include those reported in Tables 2 and 3. \*\*\* is significant at the 1% level; \*\* is significant at the 5% level; and \* is significant at the 10% level.

Table 7: FALSIFICATION EXERCISES

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	GDP P.C. 1960s-1989				CIVIL WARS 1960s-1989			
Rough terrain	-0.06 (0.09)	-0.06 (0.06)	-0.00 (0.09)	-0.02 (0.06)	0.07*** (0.02)	0.04 (0.03)	0.09** (0.03)	0.04 (0.04)
Geographic controls?		✓		✓		✓		✓
Colonial controls?			✓	✓			✓	✓
<i>N</i>	43	43	43	43	42	42	42	42
<i>R</i> <sup>2</sup>	0.01	0.56	0.26	0.83	0.12	0.26	0.39	0.52
<i>σ</i>	0.81	0.59	0.74	0.39	0.26	0.26	0.23	0.23

*Notes.* Estimates are based on OLS regressions. Robust standard errors are shown in parentheses. *Rough terrain* is measured as the natural log of the percent of a country's area covered by mountains. Geographic and colonial controls include those reported in Tables 2 and 3. \*\*\* is significant at the 1% level; \*\* is significant at the 5% level; and \* is significant at the 10% level.

Table 8: LOGIT ANALYSES OF DETERMINANTS OF CIVIL WAR 1960-1999

	(1)	(2)	(3)	(4)	(5)	(6)
	CIVIL WAR		"ETHNIC" WAR		CIVIL WAR (COW)	
Prior war	-1.30* (0.68)	-1.61** (0.68)	-1.21* (0.68)	-1.51** (0.68)	-2.29** (0.90)	-2.65*** (0.91)
Per capita income	-0.47 (0.36)	-0.55 (0.41)	-0.56 (0.40)	-0.66 (0.45)	-1.93** (0.87)	-2.41*** (0.92)
log(population)	0.37* (0.22)	0.56** (0.24)	0.38* (0.22)	0.54** (0.24)	0.68* (0.35)	1.16** (0.45)
log(% mountainous)	0.28* (0.17)	-0.05 (0.19)	0.23 (0.17)	-0.05 (0.19)	0.77*** (0.26)	0.24 (0.29)
Rural insurgency		1.44*** (0.52)		1.31** (0.52)		2.44** (1.04)
Noncontiguous state	1.70 (1.18)	1.56 (1.20)	1.85 (1.23)	1.69 (1.24)	2.30 (1.48)	1.74 (1.53)
Oil exporter	0.30 (0.70)	0.22 (0.71)	0.11 (0.77)	0.06 (0.78)	2.03** (1.03)	2.30** (1.06)
[1em] New state	1.73*** (0.58)	1.71*** (0.58)	1.68*** (0.58)	1.68*** (0.58)	1.63** (0.74)	1.77** (0.78)
Instability	0.70 (0.48)	0.62 (0.48)	0.52 (0.50)	0.46 (0.50)	1.62*** (0.60)	1.40** (0.60)
Democracy	0.02 (0.04)	0.03 (0.04)	0.02 (0.04)	0.03 (0.04)	0.12** (0.05)	0.12** (0.05)
Ethnic fractionalization	0.33 (0.90)	0.77 (0.98)	0.17 (0.91)	0.64 (0.99)	-0.26 (1.17)	-0.37 (1.28)
Religious fractionalization	-0.78 (1.06)	-1.33 (1.10)	-0.57 (1.09)	-1.16 (1.13)	-1.41 (1.50)	-1.68 (1.58)
Constant	-7.22*** (1.93)	-8.95*** (2.16)	-7.06*** (1.97)	-8.60*** (2.18)	-9.62*** (3.28)	-14.00*** (4.36)
N	1,567	1,567	1,527	1,527	1,286	1,286

Notes. Estimates are based on logistic regressions. \*\*\* is significant at the 1% level; \*\* is significant at the 5% level; and \* is significant at the 10% level.

Table 9: DID AND FE ESTIMATES: RURAL INSURGENCY AND DEMOCRACY

	(1)	(2)	(3)	(4)	(5)	(6)
	POLITY IV 1960s-2010			FREEDOM HOUSE 1970s-2010		
Rural insurgency $\times$ post-1990	-0.11* (0.07)	-0.10*** (0.02)	-0.09*** (0.02)	-0.14** (0.08)	-0.15*** (0.02)	-0.13*** (0.02)
Contemporaneous controls?			✓			✓
Estimation	DID	FE	FE	DID	FE	FE
$N$	94	2,196	1,945	98	1,855	1,621
$R^2$	0.79	0.35	0.38	0.73	0.20	0.17
$\sigma$	0.17	0.18	0.17	0.19	0.19	0.19

*Notes.* Estimates are based on OLS regressions. Contemporaneous controls include those reported in Tables 2 and 3. Robust standard errors are shown in parentheses. \*\*\* is significant at the 1% level; \*\* is significant at the 5% level; and \* is significant at the 10% level.

Table 10: POTENTIAL MECHANISMS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CIVIL WARS 1960S-1989				EXEC. CONSTRAINTS 1960S-1989			
Rural insurgency	0.27*** (0.08)	0.23*** (0.08)	0.25*** (0.09)	0.17* (0.09)	-0.38 (0.46)	-0.27 (0.50)	0.01 (0.39)	-0.09 (0.46)
Geographic controls?		✓		✓		✓		✓
Colonial controls?			✓	✓			✓	✓
$N$	42	42	42	42	42	42	42	42
$R^2$	0.24	0.38	0.42	0.56	0.02	0.13	0.57	0.66
$\sigma$	0.24	0.24	0.23	0.22	1.55	1.61	1.09	1.09

*Notes.* Estimates are based on OLS regressions. Geographic and colonial controls include those reported in Tables 2 and 3. Robust standard errors are shown in parentheses. \*\*\* is significant at the 1% level; \*\* is significant at the 5% level; and \* is significant at the 10% level.



Table 11: MEDIATING ROLE OF POTENTIAL MECHANISMS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	POST-1990 POLITY IV				POST-1990 FREEDOM HOUSE			
Rural insurgency	-0.22*** (0.08)	-0.17** (0.08)	-0.22*** (0.08)	-0.17** (0.08)	-0.21** (0.09)	-0.17* (0.09)	-0.21** (0.09)	-0.16* (0.09)
Civil wars 1960s-1989		-0.32** (0.14)		-0.32** (0.14)		-0.28* (0.15)		-0.28* (0.15)
Exec. constraints 1960s-1989			0.03 (0.04)	0.03 (0.03)			0.02 (0.04)	0.02 (0.03)
Geographic controls?	✓	✓	✓	✓	✓	✓	✓	✓
Colonial controls?	✓	✓	✓	✓	✓	✓	✓	✓
<i>N</i>	42	42	42	42	42	42	42	42
<i>R</i> <sup>2</sup>	0.49	0.56	0.50	0.57	0.53	0.57	0.53	0.57
<i>σ</i>	0.20	0.19	0.20	0.19	0.21	0.21	0.22	0.21

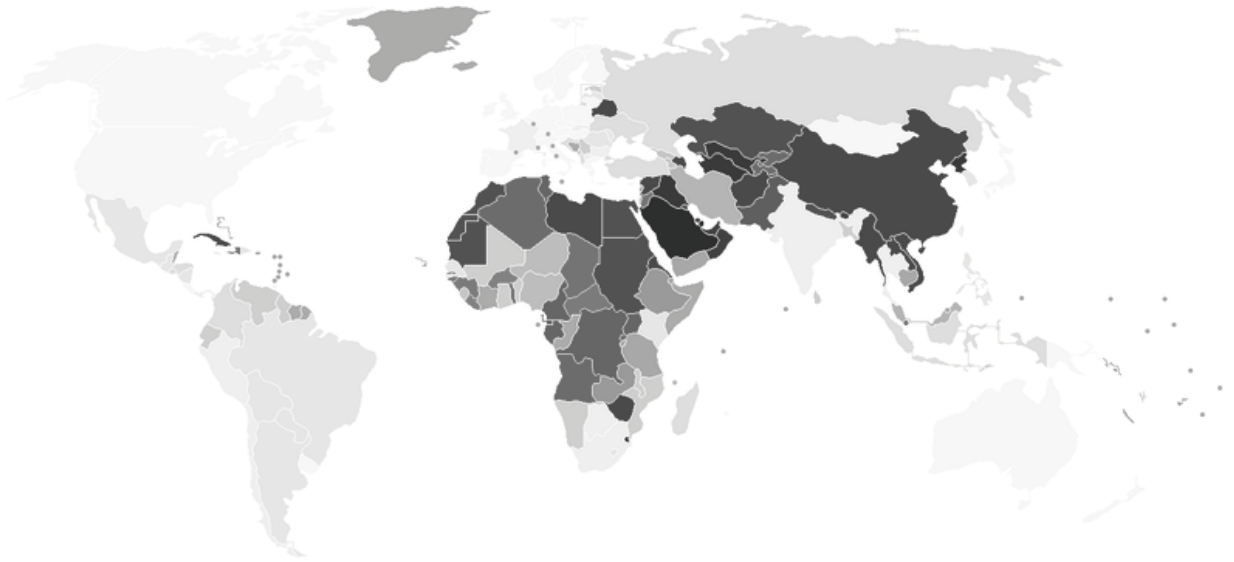
*Notes.* Estimates are based on OLS regressions. Geographic and colonial controls include those reported in Tables 2 and 3. Robust standard errors are shown in parentheses. \*\*\* is significant at the 1% level; \*\* is significant at the 5% level; and \* is significant at the 10% level.

Table 12: SUPPORT FOR VIOLENCE AND ONE-PARTY RULE

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	SUPPORT FOR VIOLENCE				SUPPORT ONE-PARTY RULE			
Rural insurgency	0.06*	0.36*	0.06*	0.35*	0.09**	0.48**	0.08**	0.48**
	(0.03)	(0.19)	(0.03)	(0.19)	(0.04)	(0.22)	(0.03)	(0.20)
Individual controls?			✓	✓			✓	✓
Estimation	LPM	Logit	LPM	Logit	LPM	Logit	LPM	Logit
<i>N</i>	23,545	23,545	22,340	22,340	70,143	70,143	66,207	66,207
<i>R</i> <sup>2</sup>	0.01		0.01		0.01		0.04	
$\sigma$	0.39		0.39		0.41		0.40	

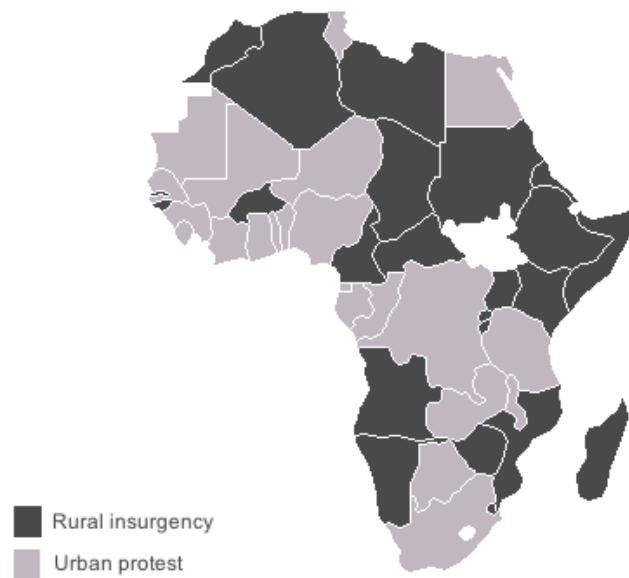
*Notes.* Estimates are based on Linear Probability Models (LPM) and logistic regressions (Logit). Robust standard errors clustered at the country level are shown in parentheses. Controls include age of the respondent, a gender indicator variable, an indicator variable that equals one if the respondent lives in a rural location, five fixed effects for the respondent's living conditions, ten fixed effects for the educational attainment of the respondent, and ten fixed effects for the ethnicity of the respondent. Additionally, columns (5)-(8) include fixed effects for the Afrobarometer round. \*\*\* is significant at the 1% level; \*\* is significant at the 5% level; and \* is significant at the 10% level.

Figure 1: DEMOCRACY LEVELS AROUND THE WORLD



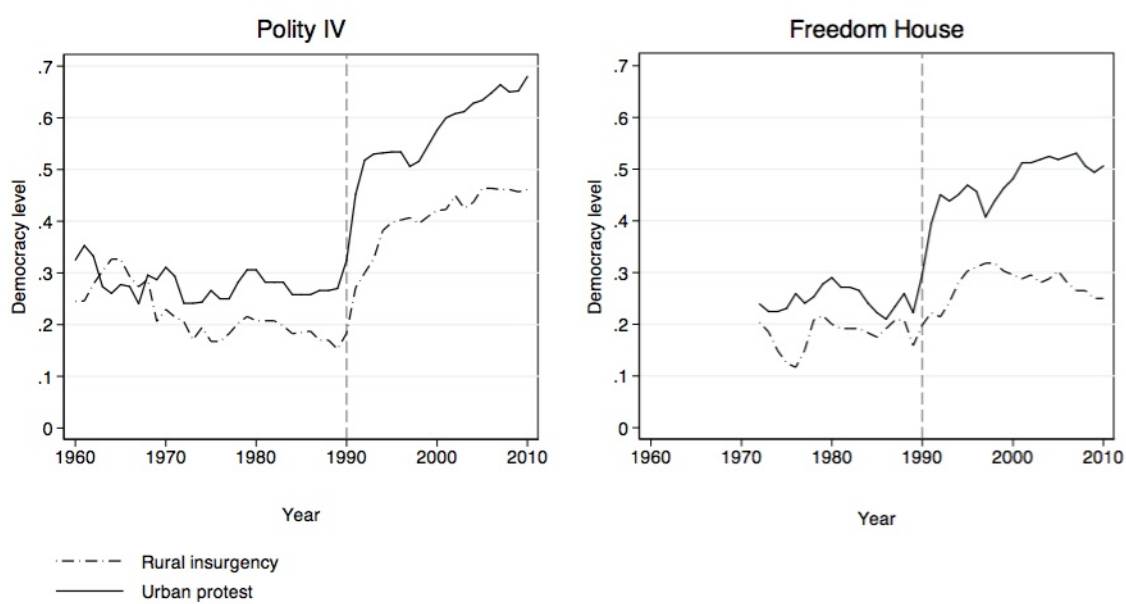
*Notes.* Darker colors indicate less democratic regimes, based on the Polity IV scores (2010).

Figure 2: TYPES OF INDEPENDENCE MOVEMENTS IN AFRICA



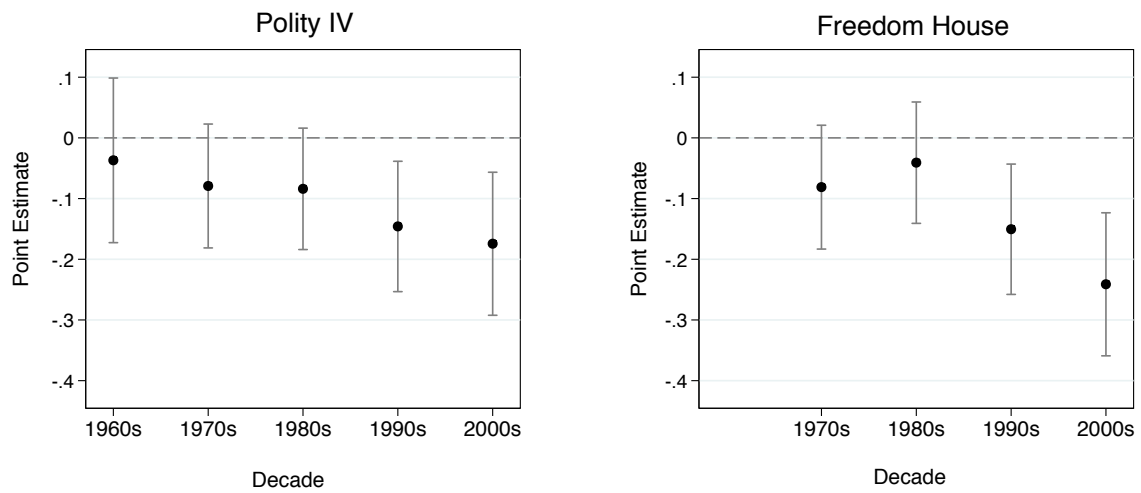
*Notes.* This figure shows countries where independence movements relied heavily on rural insurgency strategies (dark gray) versus countries that relied mostly on urban protests (light gray).

Figure 3: DEMOCRACY LEVELS BY TYPE OF INDEPENDENCE MOVEMENT



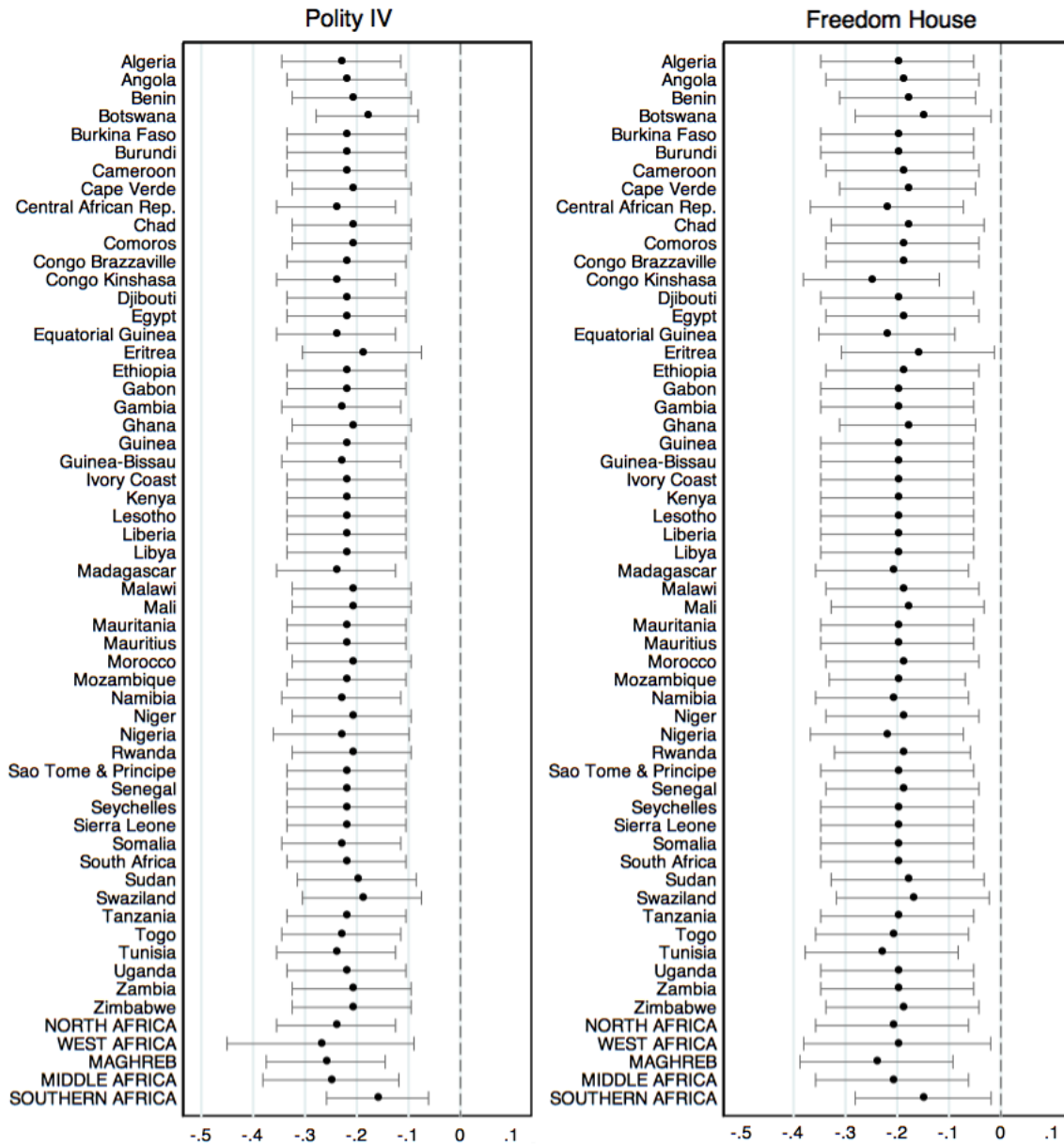
*Notes.* This figure shows annual changes in the average level of democracy in rural insurgency versus urban protest countries, based on data from Polity IV (left) and Freedom House (right).

Figure 4: ESTIMATED EFFECT OF RURAL INSURGENCY ON DEMOCRACY BY DECADE



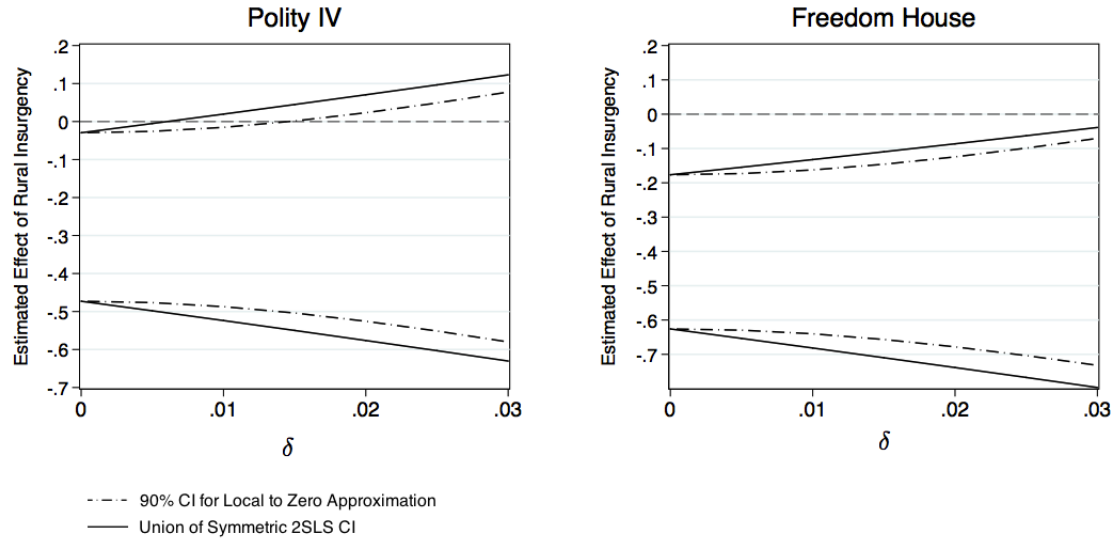
*Notes.* Black dots represent point estimates from OLS regressions of the average democracy score by decade on the rural insurgency dummy. Vertical bars indicate 90% confidence intervals.

Figure 5: SENSITIVITY TO THE EXCLUSION OF SPECIFIC COUNTRIES AND SUBREGIONS



Notes. Black dots represent point estimates from OLS regressions of the average post-1990 democracy score on the rural insurgency dummy, excluding specific countries and subregions. All estimates include both geographic and colonial controls. Horizontal bars indicate 90% confidence intervals.

Figure 6: ROBUSTNESS TO NON-PERFECT EXOGENEITY



*Notes.* These plots show confidence intervals around the treatment parameter while relaxing the exclusion restriction, following Conley et al. [2012]. The set of dashed lines present the symmetric 2SLS 90% confidence intervals, and the set of solid lines corresponds to the local-to-zero approximation method.